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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 14

Application Number: 09/742,809
Filing Date: December 19, 2000
Appellant(s): FAISAL, MOHAMMAD

John C. Stattler
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 23, 2004.

(1)   ***Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

(2)   ***Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or

be directly affected by or have a bearing on the decision in the pending appeal is contained in the

brief.

(3)   ***Status of Claims***

The statement of the status of the claims contained in the brief is correct.

(4)   ***Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in

the brief is correct.

(5)   ***Summary of Invention***

The summary of invention contained in the brief is correct.

(6)   ***Issues***

The appellant's statement of the issues in the brief is correct.

(7)   ***Grouping of Claims***

Appellant's brief includes a statement that claims 1-15 stand or fall together.

Accordingly, appellants are not grouping the claims on appeal.

(8)   ***Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9)   Prior Art of Record

5,930,788   Wical   7-1999

(10)   Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wical (U.S.

Patent No. 5,930,788).

As to claim 1, Wical discloses a method for generating cross-references among categories

in a knowledge base (See abstract), said method comprising the steps of:

extracting, from a plurality of documents, a plurality of themes, wherein a theme

identifies subject matter contained in a corresponding document (See column 14, lines 8-42);

generating a theme strength for said themes, said theme strength reflects the amount of

subject matter contained in a document for a corresponding theme relative to other themes in

said document (See column 14, lines 24-42);

generating a plurality of scores (See column 9, lines 14-48, wherein "score" reads on

"weight"), from said theme strengths (See column 20, claim 12 language), to identify a relative

theme pair strength (See column 20, claim 12 language) for at least one pair of said themes

extracted from said documents (See column 20, claim 12 language);

selecting theme pairs based on said scores (See column 11, lines 35-65);

selecting category pairs in said knowledge base (See column 11, lines 23-34) by mapping

said themes of said theme pairs selected to corresponding categories of said knowledge base (See

column 14, lines 24-53); and

generating a cross reference in said knowledge base between categories of said category

pairs (See abstract), wherein said cross reference identifies an association between said category

pairs (See column 21, claim 13 language).

As to claim 2, Wical discloses wherein the step of generating a plurality of scores (See

column 9, lines 14-48, wherein "score" reads on "weight") comprises the steps of:

generating a matrix comprising a plurality of columns and rows to form a plurality of

entries, wherein each column represents one of said themes and each row represents one of said

themes (See column 10, table 1); and

generating a score for at least a subset of said entries of said matrix (See column 10, lines

19-32, wherein "matrix" reads on "table"), such that a score reflects a relative theme pair

strength between two themes represented by said entry for said documents (See column 11, lines

35-57).

As to claim 3, <u>Wical</u> discloses wherein the step of generating a score (See column 9, lines 14-48, wherein "score" reads on "weight") for at least a subset of said entries of said matrix (See column 10, lines 19-32, wherein "matrix" reads on "table") comprises the steps of:

calculating a plurality of products for an entry by multiplying theme strengths (See) corresponding to two themes represented by said entry for each document (See) that includes said two themes represented by said entry (See column 11, lines 35-57); and

summing said products for an entry to generate said score (See column 20, claim 12 language).

As to claim 4, <u>Wical</u> discloses wherein the step of selecting category pairs in said knowledge base (See abstract) comprises the steps of:

determining whether only one of said themes exist as a category in said knowledge base (See column 18, claim 3 language);

if so,

generating a new category in said knowledge base for said theme (See column 16, lines 1-28);

generating a new cross-reference relationship between said new category and a category for which one of said themes exist (See column 12, lines 11-40); and generating a new score for said new cross-reference relationship (See column 19, claim 9 language).

As to claim 5, <u>Wical</u> discloses wherein the step of selecting category pairs in said knowledge base (See column 8, lines 5-25) comprises the steps of:

determining whether both of said themes exist as categories in said knowledge base (See

column 8, lines 5-25); if so,

determining whether a cross reference relationship exists from said category pair (See

column 8, lines 49-67, and see column 9, lines 1-18);

if not,

generating a new cross-reference relationship between said category pair (See column 15,

lines 24-46);

generating a new score for said new cross-reference relationship (See column 16, lines 1-

28); and

if so, generating a new score for said existing cross-reference relationship (See column

19, claim 9 language).

As to claim 6, <u>Wical</u> discloses a system comprising:

a search and retrieval module for receiving a user query and for generating a query

response including query feedback (See column 17, lines 16-32, wherein "query" reads on "input

....user interface");

a knowledge base, coupled to said search and retrieval module, for storing relationships

among terminology for use as query feedback (See column 9; lines 41-67, also see column 12,

lines 42-67);

a knowledge base processing system (See column 15, lines 24-46),

coupled to said knowledge base for processing a plurality of documents and

automatically extending said relationships among said terminology in said knowledge base, said

knowledge base processing system for extracting, from said documents, a plurality of themes, wherein a theme identifies subject matter contained in a corresponding document, for generating a theme strength for said themes, said theme strength reflects the amount of subject matter contained in a document for a corresponding theme relative to other themes in said document (See column 20, claim 12 language, also see column 17, lines 32-45);

for generating a plurality of scores, from said theme strengths, to identify a relative theme pair strength for at least one pair of said themes extracted from said documents, for selecting theme pairs based on said scores (See column 9, lines 50-67, also see column 6, lines 47-64), for selecting category pairs in said knowledge base by mapping said themes of said theme pairs selected to corresponding categories of said knowledge base, and for generating a cross reference in said knowledge base between categories of said category pairs, wherein said cross reference identifies an association between said category pairs (See column 11, lines 23-57, also see column 8, lines 49-66).

As to claim 7, Wical discloses wherein the knowledge base processing system further for generating a matrix comprising a plurality of columns and rows to form a plurality of entries (See column 10, tables 1-2), wherein each column represents one of said themes and each row represents one of said themes and for generating a score for at least a subset of said entries of said matrix, such that a score reflects a relative theme pair strength between two themes represented by said entry for said documents (See column 11, lines 23-57).

As to claim 8, <u>Wical</u> discloses wherein the knowledge base processing system further for calculating a plurality of products for an entry by multiplying theme strengths corresponding to two themes represented by said entry for each document that includes said two themes represented by said entry, and for summing said products for an entry to generate said score (See column 14, lines 24-67).

As to claim 9, <u>Wical</u> discloses wherein the knowledge base processing system further for determining whether only one of said themes exist as a category in said knowledge base (See column 18, lines 27-38), if so, for generating a new category in said knowledge base for said theme (See column 16, lines 1-28), for generating a new cross-reference relationship between said new category and a category for which one of said themes exist, and for generating a new score for said new cross-reference relationship (See column 12, lines 11-40, also see column 19, claim 9 language).

As to claim 10, <u>Wical</u> discloses wherein the knowledge base processing system further for determining whether both of said themes exist as categories in said knowledge base (See column 8, lines 5-25);

if so, for determining whether a cross reference relationship exists from said category pair (See column 8, lines 49-67, and see column 9, lines 1-18);

if not, for generating a new cross-reference relationship between said category pair, for generating a new score for said new cross-reference relationship (See column 15, lines 24-46, also see column 16, lines 1-28);

and if so, for generating a new score for said existing cross-reference relationship (See column 19, lines 59-67, also see column 20, lines 1-12).

As to claim 11, <u>Wical</u> discloses a computer readable medium comprising a plurality of instructions (See column 17, lines 32-50), which when executed, causes the computer to perform the steps of:

extracting, from a plurality of documents, a plurality of themes, wherein a theme identifies subject matter contained in a corresponding document (See column 14, lines 8-42);

generating a theme strength for said themes, said theme strength reflects the amount of subject matter contained in a document for a corresponding theme relative to other themes in said document (See column 14, lines 24-42);

generating a plurality of scores (See column 9, lines 14-48, wherein "score" reads on "weight"), from said theme strengths (See column 20, lines 52-67, and see column 21, lines 1-4) to identify a relative theme pair strength (See column 20, lines 51-67) for at least one pair of said themes extracted from said documents (See column 20, lines 51-67);

selecting theme pairs based on said scores (See column 11, lines 35-65);

selecting category pairs in said knowledge base by mapping said themes of said theme pairs selected to corresponding categories of said knowledge (See column 14, lines 24-53); and

generating a cross reference in said knowledge base between categories of said category pairs (See abstract), wherein said cross reference identifies an association between said category pairs (See column 21, lines 5-31).

As to claim 12, <u>Wical</u> discloses wherein the step of generating a plurality of scores

comprises the steps of:

generating a matrix comprising a plurality of columns and rows to form a plurality of

entries, wherein each column represents one of said themes and each row represents one of said

themes (See column 10, table 1, shows "themes" and "theme strengths"); and

generating a score for at least a subset of said entries of said matrix, such that a score

reflects a relative theme pair strength between two themes represented by said entry for said

documents (See column 6, lines 25-64).

As to claim 13, <u>Wical</u> discloses wherein the step of generating a score for at least a subset

of said entries of said matrix reads on comprises the steps of: ·

calculating a plurality of products for an entry by multiplying theme strengths

corresponding to two themes represented by said entry for each document that includes said two

themes represented by said entry (See column 14, lines 24-67).; and

summing said products for an entry to generate said score (See column 6, lines 47-63).

As to claim 14, <u>Wical</u> discloses wherein the step of selecting category pairs in said

knowledge base comprises the steps of:

determining whether only one of said themes exist as a category in said knowledge base

(See column 18, 27-39, wherein "exist" reads on "identified");

if so,

generating a new category in said knowledge base for said theme (See column 16, lines 1-28);

generating a new cross-reference relationship between said new category and a category for which one of said themes exist relationship (See column 12, lines 11-40); and

generating a new score for said new cross-reference relationship (See column 19, claim 9 language).

As to claim 15, <u>Wical</u> discloses wherein the step of selecting category pairs in said knowledge base (See abstract) comprises the steps of:

determining whether both of said themes exist as categories in said knowledge base (See column 8, lines 5-25);

if so,

determining whether a cross reference relationship exists from said category pair (See column 8, lines 49-67, and see column 9, lines 1-18);

if not,

generating a new cross-reference relationship between said category pair (See column 15, lines 24-46);

generating a new score for said new cross-reference relationship (See column 16, lines 1-28); and

if so,

generating a new score for said existing cross-reference relationship (See column 19, lines 62-67, also see column 20, lines 1-12).

(11)   *Response to Argument*

1.   The '788 Patent Does Not Disclose the Claimed Invention of The Subject Application argument.

Firstly, appellant argues (Answer, page 6) '788 Patent is not related to generating cross-references between category pairs.

In response, the examiner maintains that <u>Wical</u> teaches category pairs in a category cross-reference database as acknowledged by the appellant. In teaching using category pairs, from a category cross-reference database in column 2, lines 12-29, <u>Wical</u> has inherently disclosed the fact that category cross-reference pairs have been generated and stored in the system. <u>Wical</u> goes further to teach in figure 1, disambiguation process 160 that utilizes the knowledge base 155, and the category cross reference database (including category pairs classification in column 2, lines 12-29) to rank query responses, also see <u>Wical</u> column 4, lines 41-60.

The appellant argues that '788 only disclose "using" category pairs, from a category cross-reference database in the disambiguation process (column 8, lines 34-36, cited by the examiner).

The Examiner maintains that the disambiguation process 160 is part of to the entire knowledge system knowledgebase figure 1, 100. Therefore, since the disambiguation process 160 is part of the entire knowledge system, the generation of the cross-reference categories in the

database 155; is too part of the <u>Wical</u> system. How could the "category pairs" exist in the

database without them being created or generated?

To what end or how these category cross references pairs are being used is separate

matter than the fact they have been generated and reside in the database as a part of the system.

In fact by stating in column 2, lines 20-29 "the disambiguation processing also compares

the document category pairs with category cross reference database pairs", <u>Wical</u> has gone

further to extend the "generating" process to teaching methods for "using" the existing category

pairs.

<u>Wical</u> in column 4, lines 6-28, teaches the content processing system dynamically

generates categories based on the contextual use of the term for which the categories are being

generated; and further teaches dynamically linking categories based on terminology contained in

the documents results in generation of a knowledge base. In conclusion, The Examiner finds the

argument not to be persuasive.

2. The '788 Patent Does Not Disclose Generating Relative Theme Pair Strengths For a Pair of Themes argument.

Secondly, appellant argues (Answer, page 7) '788 Patent does not disclose generating

relative theme pair strengths for a pair of themes.

In response, examiner maintains that <u>Wical</u> teaches 10 column 14, lines 24-40 assigning

each theme term, including words and phrases, a relative strength then linking each theme term

to another by categories in the knowledge base. The theme term indicating more than one theme can include a theme pair or a theme concept or linked theme, and then collective theme strength can be calculated. In column 9, lines 62-67, and column 10, lines 1-17, Wical teaches the disambiguation process sums the theme weights of document themes for comparison against a theme weight for another document theme that is also the theme concept for the first themes, indicating to The Examiner that relative theme pair strengths for a pair of themes is being generated.

The appellant argues that '788 only disclose "ascribing a weight to a single theme term" particularly, the disambiguation process compares the theme weights of two terms to select a category (column 9, lines 14-48, cited by the examiner).

The Examiner maintains that Wical in columns 8-9, initially teaches the disambiguation processing 160 compares all combinations of parent theme concept pairs to category pairs of the category cross reference database and further generates pairs from all combinations of theme concepts. The, Wical in column 9, lines 14-48, further teaches how the comparison is validated. Ascribing a weight to a single theme or theme term or a theme concept, which can be made up from more than one theme (See Wical, Table 2, Theme Concept), validates the comparison.

The fact that from the single theme; a theme category pair is created to be stored in the category pair database is sufficient enough to see that the theme weights are summed up (calculated), compared, and presented as a combined theme pair relative strength, as taught in Wical column 20, lines 59-67 (Claim 12). Summing (calculating) all theme strengths for all themes classified under the parent category (which can contain a pair of themes only) indicates

that the weights (scores) have been ascribed to each themes that is linked together and stored as a cross reference pair in the database.

Also <u>Wical</u> in column 14, lines 8-35 teaches the theme vector processor 750 generates a list of theme terms, including words and phrases, and assigns a relative theme strength to each theme term; in addition, the theme vector processor 750 generates, for each term, an importance number, a theme strength, and an overall capacity weight of collective content importance indicating to The Examiner that '788 Patent does teach generating relative theme pair strengths for a pair of themes.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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May 11, 2005

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